Mastering the New Public Health

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A B S T R A C T

The dramatic changes in the field of public health are reverberating in schools of public health in a number of ways, not the least of which is action by the deans of the Association of Schools of Public Health (ASPH) to ensure that graduates with master's of public health degrees are competent to meet the current challenges of practice.

The conceptual framework at the center of this activity describes 3 domains—skills, perspectives, and applications—in which alumni of schools of public health may be required to demonstrate competency. ASPH work in this area is grounded in previous national and professional competency definitions and school- and department-specific competency development; it is distinct from earlier work, however, because its focus is on competency at the master's level across the graduate schools of public health. (*Am J Public Health.* 2000;90: 1208–1211)

The field of public health is undergoing a transition that is making itself felt deep in the heart of public health academe. The changing nature of the people entering the field of public health is, moreover, causing graduate schools of public health to reconsider the way students are prepared for public health practice.

Changing Student Bodies and Context for Practice

Students of public health today are increasingly younger and more varied in the academic disciplines and the perspectives they bring to the profession. In previous years, public health training was often the domain of mature graduates from medicine and the biological sciences who entered after some years of practical experience. Now, many individuals go directly into schools of public health or enter with just 2 or 3 years of experience after initial preparation in areas as diverse as social science, business, mathematics, and all fields in between.

Students who seek training in public health are also more diverse regarding ethnicity, race, culture, and gender. This happy broadening of the public health human resource pool reflects major demographic changes taking place in the US population as a whole and includes the fact that increasing numbers of women are attending professional schools. It also reflects a shrinking of the world community and the global nature of health problems. A significant proportion of the public health student body comprises foreign nationals seeking education from a US school, as well as Americans preparing to work with health problems that are international in scope.

The context of work for the new public health graduate has also changed markedly. Public health professionals joining the workforce today interact even more closely than those in years past with confreres in medicine, nursing, social work, and other fields whose primary goals may seem distal to public health. These colleagues, in fields as varied as the transportation or building industries, or the prison or welfare systems, increasingly focus on (or can be encouraged to consider) the health and safety of their constituencies and the general public. Professionals in these and other fields may be experiencing changes in their areas of work as rapid and pervasive as in the core public health areas. Honing interpersonal skills and employing team approaches to decision making and problem solving have taken on a whole new meaning for public health professionals.

Further, public health practice has expanded to include virtually every sector of society, from agriculture to zoology, and it pervades people's lives in ways that few individuals thoroughly appreciate. Traditionally, graduates of schools of public health saw local, state, and federal government health departments and agencies as the primary arena for practicing their craft. Currently, however, according to deans of schools of public health and career placement officers, fewer than one quarter of individuals graduating with public health degrees enter such settings. Public health work is ubiquitous, and one may encounter large numbers of professionals with graduate public health training in—naming only a few employment options—community-based organizations, not-for-profit agencies, business, the insurance industry, foundations, high-tech operations, and every imaginable venue for providing conventional and alternative prevention services.

Changing Fundamentals of Practice

The concepts, principles, and methods underlying the work of public health have evolved dramatically in recent decades, and this rapid development shows no sign of stopping. Interest in the social and behavioral sciences and epidemiology, in particular, is expanding as a result of research advances and improvements in methodologies. Genomic science, spurred by the Human Genome Project, is giving rise to discoveries that will definitively change the way we understand the human organism and prevent and treat disease. Accompanying changes in the molecular and biological sciences have been, and continue to be, inevitable. This acceleration in basic scientific discoveries also speeds up the need for their continuous translation through public health disciplines into safe, practical, accessible benefits for all.

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However, at the same time that gene-related research is enhancing our potential to combat health problems as never before, the legal, ethical, and social issues attending new findings are profound. A new interdepartmental curriculum in public health genetics at the University of Michigan School of Public Health is tackling these issues. The curriculum provides a model for preparing professionals across the public health core areas to deal with the changes genomic science is bringing to the field.[1] Deciding how to harness new knowledge in ways that protect, preserve, and promote what is strong and productive in social, cultural, and moral terms requires full public participation and discourse. Ensuring community involvement in decision making—the hallmark of the public health process—is becoming an even more important, sensitive, and complex endeavor.

The worldwide impact of new communication technologies and computer-based tools transforming information exchange in all its aspects brings great promise for improving the health of the public. With these technologies, however, has come the limitless potential for disseminating misinformation and an unfortunate capacity to extol the popular rather than the accurate, especially as it relates to health. Attending the exponential growth in the availability of information is the need for people to sort it out, be more analytical in their use of it, and apply it more effectively in problem solving. Using information that is related to clinical treatment and prevention services is especially challenging given systemwide change. The communication revolution and recent advances in science have been accompanied by new ways of financing, organizing, and delivering health services at a pitch not realized since the advent of Medicare and Medicaid. Public health professionals in administration and financing also need to play key roles in informing policy that ensures coverage and access for all.

The Question for Academic Public Health

For those in academic public health, the question related to these transitions is both simple and exceedingly difficult. What core competencies do the 4800 annual master's graduates[2] need to perform at optimum level in the greatly expanded, rapidly changing world of practice? Of course, the topic of public health core competencies has received considerable attention over the years with a range of excellent reports and guidelines, the most groundbreaking documents of which were produced by the Centers for Disease Control and Prevention and the Health Resources and Services Administration, along with their practice and academic partners, in the early and mid-1990s.[3,4] The latest iteration of competency drafting was begun in 1999 at the Agency for Toxic Substances and Disease Registry by the Task Force on Public Health Workforce Development.[5] This task force has produced basic, crosscutting, and technical core competencies for public health practice and is only the most recent outgrowth of universal competencies as delineated in the seminal report of the Public Health Faculty/Agency Forum, which was published in 1991.[3] An important report published in 1998, sponsored by the Columbia University School of Nursing and Center for Health Policy and Services Research and supported by a grant from the Robert Wood Johnson Foundation, outlined a curriculum for the key professional groups in the public health workforce that was based on the essential public health services.[6] These national efforts in competency development, however, have focused on a desired knowledge and skills base or a profile of practicing public health professionals; they have not addressed the educational goals of a single or comprehensive MPH program or the core content area of public health education.

On the other hand, people from various disciplines represented in graduate schools of public health have commented on the knowledge, skills, values, and, in some cases, competencies that they assert are needed in their specialties in addition to the set of abilities that every public health professional should demonstrate. For example, maternal and child health faculties, through their professional organization, the Association of Teachers of Maternal and Child Health, have developed a set of competencies to provide the basis for curriculum development for both master's and doctoral students, as well as continuing education programming for working professionals.[7]

Health educators, through the formation of the National Commission for Health Education Credentialing, have created a voluntary competency-based examination derived from 7 areas of responsibility.[8] However, graduates with bachelor's, master's, or doctoral degrees are equally eligible to sit for the health education examination, provided they have met other health educational prerequisites.[9]

Environmental health professionals, who have been supported by the Health Resources and Services Administration, have developed core competencies and curricula for environmental health practitioners.[10] The voluntary certifying examination for environmental health professionals, which is similar to the health education examination, is open to all graduates, since level of academic preparation is not the criterion for entry into the examination (L. Gordon, written communication, March 2000). Curriculum content and objectives, but not competencies, for education in graduate health services administration have been specified by the Accrediting Commission on Education for Health Services Administration.[11] Finally, but not exhaustively, the *Guide to Clinical Preventive Services*,[12] which focuses on clinical encounters, and the *Guide to Community Preventive Services*,[13] which focuses on population-based interventions, have both pointed to the capacity needed for the delivery of prevention-oriented care.[14]

Some, but not all, schools of public health have adopted competencies for the MPH degree, at the school or departmental level or both, on the basis of various existing guidelines. The central issue, however, is identifying the core of MPH competency development needed across the schools to ensure contemporary and professional practice.

ASPH Explores Needed MPH Competencies

The proliferation of competency statements, the existing variation in core requirements across the schools, and, most especially, the changes occurring in the field have prompted the deans of the 28 accredited graduate schools of public health, through the Association of Schools of Public Health (ASPH), to revisit the issue of master's-level public health competence. A current aim of the ongoing ASPH project is to ensure that MPH graduates are prepared to meet the challenges of practice in the new century. The ASPH Education Committee, as charged by the deans and supported by the membership, is attempting first to recognize the significant changes in the expectations of students, the demands of employers, and the needs of the communities to be served and, in light of that recognition, to recommend areas of core competence that should be achieved by the MPH curriculum.

Contrary to the assumptions of many, current educational requirements in the MPH curricula across the 28 accredited graduate schools of public health do not constitute standardized comprehensive instruction for generalists. Depending on which of the schools of public health a student attends, the core credit hours for the MPH degree may range from 11 to 58 hours (with an average of 17 hours among the schools) and may vary in length from 11 months to 2½ years. While each accredited school offers students a minimum of credits and the opportunity to specialize (usually, but not always, through course-based instruction) in 5 core areas—biostatistics, epidemiology, environmental sciences, health services administration, and social and behavioral sci-

ences—the similarities end there. Schools of public health are not uniform in the way they provide the educational foundation for practice.

Noting the differing configurations of public health training and the challenges of public health in the 21st century has led the ASPH deans to raise several questions central to the nature of the education students receive and, subsequently, the impact of academic public health on practice. These questions include the following: Do the 5 required public health areas as mentioned above (and currently mandated by the Council on Education for Public Health, the independent accrediting body for schools and programs of public health[15]) include the right substantive core for the MPH degree? What competencies should be reflected in the core so that changes in practice, including those related to electronic communications, data management, and other technological and scientific advances, may be fully acknowledged? How can learning experiences (classroom and other forms) be organized and sequenced to achieve core competency? Should demonstration of proficiency, rather than number of credit hours taken, be the indicator of successful completion of a degree? Can practice proficiency be achieved without practica, internships, or other forms of practical experience required as part of the curriculum? How are competence and proficiency best assessed?

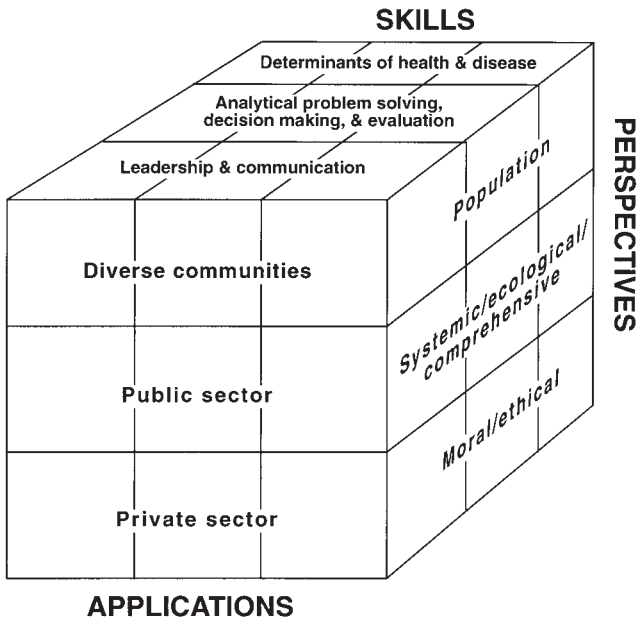

FIGURE 1—The domains of competence in a master's degree in public health.

A Conceptual Framework for Considering MPH Competence

Given the current dynamic picture that characterizes public health, the ASPH deans have expressed particular concern for developing the capabilities of graduates of schools of public health, which are related to several types of competence. Special attention should be paid to skills entailed in employing quantitative and qualitative analytic methods (including, of course, using information technology), exerting organizational leadership in a turbulent social environment, recognizing increasingly complicated causal factors and predictors of health and disease, and solving problems through teamwork in multidisciplinary and dynamic situations. Disaster preparedness is but one example of a particularly complex area of prevention.

In the course of discussions about the conceptual foundations of the MPH degree, the ASPH deans concluded that there are 3 domains—skills, perspectives, and applications—within which the kind of MPH capacities described above reside. A conceptual framework (see Figure 1) has been developed to guide ASPH efforts to review core competency needs.

To take the initial deliberations of the deans to the next level of refinement, working groups of faculty across the country are identifying competencies related to the cells of the cube presented in Figure 1. In carrying out their work, the groups are taking full advantage of the wisdom and efforts of the range of organizations and agencies that have commented on public health professional competence. Further, the ASPH Education Committee is establishing connections with other groups currently considering the question—for example, the Council on Linkages Between Academia and Practice.[16]

The ASPH is taking a flexible approach to exploring competencies and is operating under the assumption that tradition, habit, and convention are not sufficient to justify continuing to do what has been done before. The current 5 core areas of public health education are not perceived as absolute, nor are the traditional means for teaching them considered conclusive. The need for improved capacity regarding new workplace forces, electronic communications, data and information management, and scientific advances will, no doubt, extend beyond what can be offered through traditional course work. Perhaps all students preparing for public health careers do not need the same core in the same amount taught in the same way. Shaping the public health core to meet the particular needs and interests of given professionals (e.g., health behavior specialists, health care administrators, epidemiologists) may enrich their practice capacities. Such an approach might also appeal more to students' motives to become proficient in the core, as its close connection to their chosen profession would be evident. Related concerns that have been put on the table for discussion include curricular depth vs breadth, opportunities for job-specific experiences, the number of degrees offered by schools of public health, and the curricular differences between programs in public health (which, for the most part, are housed in medical schools or in departments of health sciences in other schools) and schools of public health (which are independent of medical schools), as well as relationships with other health professionals.

An example of forward thinking that could influence the reshaping of the core MPH requirements in schools of public health can be seen in the Department of Population and Family Health Sciences at the Johns Hopkins University School of Public Health. The department has incorporated elements of the "life span" approach to studying the health of human populations. This approach constitutes a new core area that covers the demographic (fertility, mortality, etc.), developmental (cognitive, emotional, etc.), and "life span" aspects of health and illness (from the perinatal stage to old age), including genetics, socioeconomic influences, and other factors. Similar examples can be found in the schema to delineate elements of quality of life at the individual and community levels[17] and in formulations of public health competence as described in social ecological approaches to communitywide change.[18]

The aim of the ASPH exploration is to confirm, revise, or perhaps significantly change the MPH core curricula. The desired result is to ensure that study at a school of public health will

enable graduates to fully and effectively use a range of new discoveries and tools to enhance public health and well-being. Identification of competencies and means for demonstrating how competencies are met will be considered through the involvement of external stakeholders, particularly practitioners and employers of MPH graduates, in a deliberative process. It is anticipated that the ASPH Education Committee will reconsider the competencies in an iterative manner as constituents respond to the value and relevance of initial observations. It is expected that individual schools of public health will be encouraged to adapt more explicit and school-specific competencies on the basis of the ASPH recommendations.

Mastering the New Public Health

The new public health requires that graduates apply their skills with intent and in settings that differ from those of their clinically trained colleagues. It demands that they withstand the prevailing and strong influences in medical care systems to treat, rather than prevent, illness and, often, to treat it with little attention to coordination and continuity and with an undue emphasis on technology and drugs. It requires them to buck the tide of a public that seems to prefer high-tech interventions and quick cures to the promises of prevention. Under difficult political circumstances, public health practitioners need to keep their attention and effort focused on averting disease in the first place and promoting health in its fullest sense, including the physical, mental, and social dimensions.

Public health professionals must work in partnership with communities of all types (including mobilizing the "communities" of business, government, science, media, etc.) as well as serve communities that experience the greatest burden of disease. They must focus their efforts on communitywide results and do so without constituencies of grateful individual patients to laud and support their work. They must account for the powerful influence within communities of cultural and normative values. Most certainly, they must carry out their work while understanding the rich history of public health and knowing how to approach the ethical issues that, inevitably, will accompany daily tasks.

Graduates who have followed a competency model in obtaining their MPH degree say that such an approach helped them take charge of their learning and that it allowed them to chart their acquisition of the knowledge and skills required for successful public health practice. Deans of public health recognize the need to fully explore the nature of 21st-century master's-level public health professional competence. They do so in light of the need to apply graduate public health education in a context of continuous change. □

Contributors

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